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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,561	06/18/2001	Garry I. Holloway	WAT0119	1090
832	7590	05/10/2005	EXAMINER	
BAKER & DANIELS LLP 111 E. WAYNE STREET SUITE 800 FORT WAYNE, IN 46802			GEDRICH, SARAH R	
			ART UNIT	PAPER NUMBER
			3625	

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/883,561	HOLLOWAY, GARRY I.	
	Examiner Sarah R. Gedrich	Art Unit 3625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 14 January 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-4,6-11,13,14 and 21-37 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-4,6-11,13,14 and 21-37 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____



DETAILED ACTION

Response to Amendment

The amendment filed 11 January 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "the one or more parameter values are *selected* from the following: depth percentage, table percentage, crown angle, crown percentage, pavilion angle, pavilion percentage, culet percentage, and girdle thickness" (emphasis added) in claims 2 and 9.

Applicant is required to cancel the new matter in the reply to this Office Action. Claims 1-4, 6-11, and 13-14 have been amended. Claims 5, 12, and 15-20 have been canceled. Claims 21-37 have been added. Claims 1-4, 6-11, 13-14, and 21-37 have been examined in this office action.

Response to Arguments

Applicant's arguments filed 14 January 2005 have been fully considered but they are not persuasive.

Applicant argues:

- **Claims 1-7 define statutory subject matter under 35 U.S.C. 101.**

In response to this argument, the Examiner notes that "computing" does not imply the use of computers and that the recited steps could be performed by the manual equivalent.

- **Malnekoff “[makes] no attempt to determine subjective or aesthetic rating on the basis of purely objective input data, but require that all necessary data be input into the system in the first instance.”**

In response to this argument, the Examiner notes that Malnekoff “[utilizes] some of the gemstone characteristics” to determine the baseline price and adjusts “based on other gemstone characteristics (Malnekoff: Column 4, lines 36-45).” Basing the adjustments on the cut and providing “a summary description of the qualities of the gemstone” (Malnekoff: Claim 3), is using objective data to provide a subjective report. The Examiner further notes that the price estimate is a quantitative assessment of the value of the gemstone.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 2 and 9 recite “parameter values are selected from the following: depth percentage; table percentage; crown angle; crown percentage; pavilion angle; pavilion

percentage; culet percentage; and girdle thickness." Depth percentage, table percentage, etc. are not values. If the user were to select the parameters, and enter values for the selected parameters, how would the system determine other parameters like brilliance that are based on more than one of the above listed parameters? Is the user selecting ranges or values under these listed parameters?

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 4, 9, and 11 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The applicant recites "aesthetic parameters," "objective parameters," "parameters," and "gem stone parameters." Both aesthetic and objective parameters of the gemstone are gemstone parameters. It is unclear to which parameters the applicant is referring in the above claims.

Claim Rejections - 35 USC § 101

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7, and 21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the “progress of science and the useful arts” (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

In the present case, Claims 1-7, and 21 fail to recite any technology within the claims. The claims recite a method for providing a gem assessment. The steps recited in the claim could be performed by the manual equivalent. The Examiner further notes that “computing” does not imply using a computer.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-4, 6-8, 10-11, 13-14, 26-28, and 34-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Malnekoff US Patent No. 6,304,853.

Malnekoff teaches an automated gemstone evaluation system. The system and method provide a gem assessment, which does not require the presence of the actual gemstone. Malnekoff further discloses:

1. Referring to claim 1. An automated method of providing a user with a gem stone assessment, the method including steps of:
 - o Receiving a plurality of objective parameter values from the user relating to the proportions of the gemstone: Receiving gemstone data 102 from the user via the input device 12 (Malnekoff: Column 4, lines 17-18; Figure 4, "102").
 - o Determining a plurality of aesthetic parameter values derived from said received objective values: The processing device 14 then computes an adjustment factor 114, based on other gemstone characteristics (Malnekoff: Column 4, lines 40-42).
 - o Computing a rating value of the gemstone based upon said aesthetic parameter values: The processor device 14 then uses the baseline price estimate and the adjustment factor to generate a pricing estimate 116 (Malnekoff: Column 4, lines 42-45). The Examiner notes that a price estimate is a form of a rating value.
 - o Providing a gem stone assessment to the user based upon said computed rating value and/or said aesthetic parameter values: The processing device 14 further generates an evaluation report including the pricing estimate 106, and communicates the evaluation report to the user 108, via the output device 16 (Malnekoff: Column 4, lines 20-25).
2. Referring to claim 2.

- One or more parameter values are selected from the following: depth percentage; table percentage; crown angle; crown percentage; pavilion angle; pavilion percentage; culet percentage; and girdle thickness: The system receives gemstone data 102 from the user via the input device 12 (Malnekoff: Column 4, lines 17-18) ands determines a baseline price estimate 112, utilizing some of the gemstone characteristics (Malnekoff: Column 4, lines 39-45). The Examiner notes that the data is input and some data being utilized would require that only “selected” data determined the baseline price.

3. Referring to claim 3.

- The aesthetic parameters include one or more of brilliance, fire, scintillation and diameter spread: The gemstone data the system preferably uses includes cut type, weight (carats), color, clarity, cut proportions, fluorescence, and the identity of the lab generating the gemstone data (Malnekoff: Column 4, lines 27-30).

4. Referring to claim 4.

- Applying an adjustment to one or more of the aesthetic parameters and/or the rating value in accordance with one or more of the following gem stone parameters: (i) vertical spread; (ii) table size; (iii) girdle thickness; (iv) culet size; (v) half facets; (vi) symmetry; (vii) polish: The cut proportion data values represent at least two or more of depth percentage, table percentage, girdle thickness, crown height, crown angle, pavilion depth, pavilion angle, culet amount, and type of finish (Malnekoff: Claim 14).

5. Referring to claim 6.

- The gem stone assessment includes a description of the visual appearance of the gem stone based upon the determined aesthetic parameters and/or the computed rating value: Preferably the gemstone evaluation report will include a plain language descriptive entry for each of the characteristics, giving the consumer a general idea where the particular characteristic places the specific gemstone within the range of possible gemstones (Malnekoff: Column 5, lines 61-65). Evaluation report further includes a summary description of the qualities of the gemstone (Malnekoff: Claim 3).

6. Referring to claim 7.

- The gemstone is a diamond: diamond (Malnekoff: Column 5, line 28).

7. Referring to claim 26.

- The gem stone assessment includes a numerical value corresponding with the computed rating value: The processor device 14 then uses the baseline price estimate and the adjustment factor to generate a pricing estimate 116 (Malnekoff: Column 4, lines 42-45). The Examiner notes that a price estimate is a form of a rating value and that a price estimate is a numerical value.

8. Referring to claim 27.

- Objective parameter values are received electronically over a telecommunications network link: Receiving gemstone data 102 from the user via the input device 12 (Malnekoff: Column 4, lines 17-18; Figure 4, "102"). For example if communication is remotely established over a shared public network, like the internet, one possible configuration for the communication access

module 24 coupled to the processing device 14 includes a network adapter card, which could subsequently be connected to hubs, transceivers, routers, and/or switches. Alternatively the connection could be provided by a dial-up modem connection through a network service provider (Malnekoff: Column 3, lines 27-35).

9. Referring to claim 28.

- The telecommunications network is the Internet: if communication is remotely established over a shared public network, like the *internet* (Malnekoff: Column 27-28, emphasis added).

10. Referring to claims 8, 10, 11, 13, and 14. Claims 8,10, 11, 13, and 14 are rejected on the same rationale as claims 1, 3, 4, 6, and 7, respectively.

11. Referring to claims 34 and 35. Claims 34 and 35 are rejected on the same rationale as claim 1.

12. Referring to claim 36. Claim 36 is rejected on the same rationale as claims 27 and 28.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 21-25, 29-33, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malnekoff in view of Shannon, Sr. US Patent No. 5,966,673 (hereinafter referred to as “Shannon”).

Malnekoff discloses automated gemstone evaluation system and method.

Malnekoff fails to discloses retrieving said aesthetic parameter values from one or more lookup tables indexed by at least two of said objective parameter values, entries in the lookup tables are predetermined values computed using a computer software program for performing virtual diamond analysis, entries in the lookup tables are predetermined values obtained by analyzing actual diamonds, computing said aesthetic parameter values from a virtual model of a diamond corresponding with the received objective parameter values using a computer software program for performing virtual diamond analysis, and the rating value is computed by summing the aesthetic parameter values.

Shannon discloses a computerized system and method for grading the cut of a gemstone. Shannon uses a system to create a data structure or model of the gemstone and simulates an illuminated gemstone to measure the exiting light. The measurements are used to determine the quality of an existing cut or to determine ideal dimensions for a stone to be cut. Shannon further discloses:

13. Referring to claim 21.

- Retrieving said aesthetic parameter values from one or more lookup tables indexed by at least two of said objective parameter values: These properties are stored in a file or data record and retrieved when needed. The dispersion indices for the material are computed based on the optical properties of the material

(Shannon: Column 9, lines 55-67). The Examiner notes that the indices are based on parameter values such as camera perspective, map of the facet (cut dimensions), etc. to determine the indices of refraction and other properties.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Malnekoff to include retrieving said aesthetic parameter values from one or more lookup tables indexed by at least two of said objective parameter values as taught by Shannon in order to apply the separate adjustments computed based on cut proportions (Malnekoff: Column 4, lines 45-63).

14. Referring to claim 22.

- Entries in the lookup tables are predetermined values computed using a computer software program for performing virtual diamond analysis: A maximum value for each of one or more attributes is computed by modeling each of the various possibilities of the cut of the gemstone and determining the highest value of each attribute for all of the possibilities modeled (Shannon: Column 52, lines 51-55). The Examiner notes that virtual diamond analysis is used in Shannon's system (electronic representation of the stone; column 8, lines 28-30)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Malnekoff to include entries in the lookup tables are predetermined values computed using a computer software program for performing virtual diamond analysis as taught by Shannon in order to provide an automated evaluation that accounts for objective data without the need for the presence of the gemstone (Column 2, lines 1-12).

15. Referring to claim 23.

- o Entries in the lookup tables are predetermined values obtained by analyzing actual diamonds: The stone is graded by comparing measurements of one or more light attributes to a maximum value established for that attribute. Such a maximum can be, for example, a theoretical maximum, a derived maximum, or some other maximum value based on actual data (Shannon: Column 52, lines 45-50). The Examiner notes that the actual data comes from maximum values of actual diamonds.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Malnekoff to include entries in the lookup tables are predetermined values obtained by analyzing actual diamonds as taught by Shannon in order to provide an automated evaluation that accounts for objective data without the need for the presence of the gemstone (Column 2, lines 1-12).

16. Referring to claim 24.

- o Computing said aesthetic parameter values from a virtual model of a diamond corresponding with the received objective parameter values using a computer software program for performing virtual diamond analysis: The scaled measurements are combined to create a composite scaled cut grade for the gemstone (Shannon: Column 49, lines 2-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Malnekoff to include computing said aesthetic parameter values from a virtual model of a diamond corresponding with the received objective parameter

values using a computer software program for performing virtual diamond analysis as taught by Shannon in order to provide a relative quality analysis without the need for the presence of the gemstone (Column 1, lines 60-65).

17. Referring to claim 25.

- o The rating value is computed by summing the aesthetic parameter values: The values of these attributes for each facet are combined by some expression and the attributes are evaluated to determine a grade for the stone (Shannon: Column 10, lines 33-35).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Malnekoff to include the rating value is computed by summing the aesthetic parameter values as taught by Shannon in order to account for positive and negative affects of the value and quality of the gemstone (Malnekoff: Column 5, lines 5-25).

18. Referring to claims 29-33. Claims 29-33 are rejected on the same rationale as set for the above in claims 21-25, respectively.

19. Referring to claim 37.

- o Input means includes an interface with a diamond proportion measuring device for receiving proportional parameters of a diamond measured by said measuring device: There are numerous existing automated techniques and devices for measuring the characteristics of a cut stone. One such device, for example, is the Sarin Diamensia measuring machine (Shannon: Column 7, lines 17-20).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Malnekoff to include input means includes an interface with a diamond proportion measuring device for receiving proportional parameters of a diamond measured by said measuring device as taught by Shannon in order to allow for gemstone data to be received from an input device located remotely (Malnekoff: Claim 5).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- www.tradeshop.com as cited from web.archive.org on 10 May 2000.
- www.niceice.com as cited from web.archive.org on 10 May 2000.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah R. Gedrich whose telephone number is (571) 272-8121. The examiner can normally be reached on M-F 7:30am - 5:00pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wynn Coggins can be reached on (571) 272-7159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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